

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number
WO 2005/026385 A1

- (51) International Patent Classification⁷: C12Q 1/68, C12N 15/11, 15/12
- (21) International Application Number: PCT/AU2004/001248
- (22) International Filing Date: 15 September 2004 (15.09.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 2003905020 15 September 2003 (15.09.2003) AU
- (71) Applicant (*for all designated States except US*): GRIFFITH UNIVERSITY [AU/AU]; Kessels Road, Nathan, QLD 4111 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): GRIFFITHS, Lynette, Robyn [AU/AU]; 14 Ewart Street, Burleigh Heads, QLD 4220 (AU). COLSON, Natalie, Jane [AU/AU]; 16 Inlet Drive, Tweed Heads, NSW 2485 (AU). LEA, Rod, A. [AU/NZ]; 16 Haast Close, Kelson, Wellington (NZ).
- (74) Agent: FISHER ADAMS KELLY; Level 13 AMP Place, 10 Eagle Street, Brisbane, QLD 4000 (AU).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: HORMONE RECEPTOR GENES AND MIGRAINE SUSCEPTIBILITY

(57) Abstract: A method of determining whether an individual has a predisposition to migraine is provided, which method includes the step of isolating a nucleic acid that has a guanine to adenine polymorphism at nucleotide (2014) of a human estrogen receptor and/or a nucleic acid that has a (306) base pair insertion in intron (7) of a human progesterone receptor gene. The presence of either polymorphism is indicative of an increased predisposition to migraine. Furthermore, the presence of both the human estrogen receptor polymorphism and the human progesterone receptor gene polymorphism indicates a three-fold greater predisposition to migraine. Also provided are kits for use with these methods, the kits comprising primers and, optionally, a restriction endonuclease such as *Btg1*, for molecular detection of a genetic a predisposition to migraine.

WO 2005/026385 A1